Lighten Up

A Closer Look at Nutrition and Fitness

Due to increases in obesity and illnesses such as diabetes and heart disease, concern about health is growing. Advice on nutrition and exercise is often reported in the news. Consequently, students are curious about such issues. The *Lighten Up* Teacher Guide serves to fuel further exploration of nutrition and fitness. By using this guide, you have an opportunity to tap into high student interest while exposing students to broader health issues.

Participation in these lessons will lead students to make global connections and understand higher-level concepts, such as making complex choices and developing a healthy lifestyle. Students will become aware of some of the issues involved in nutrition and fitness. They will realize that they can make a positive difference through their actions.

The lesson plans in this guide are tailored for grades 4–6 and address various subjects, such as science, language arts, mathematics, and social studies. Each lesson plan is designed to stand alone. As such, they do not need to be presented in sequential order. Helpful reproducible worksheets appear at the end of the guide. The book titles referenced in this guide include:

A Million Moves: Keeping Fit

Big Fat Lies: Advertising Tricks

Energy In, Energy Out: Food as Fuel

Fast Food: Slowing Us All Down

Grocery Shopping: It's in the Bag

Looking at Labels: The Inside Story

Snack Attack: Unhealthy Treats

The Shape of Good Nutrition: The Food Pyramid

As students investigate the topics addressed in the guide and become more aware of nutrition and exercise, they will sharpen their critical thinking skills to work towards creative solutions to worldwide problems. We invite you to jump in and ask questions with your class as you have fun learning more about nutrition and fitness.

Developmental services by Shakespeare Squared
Project Editor: Reagan Miller

www.crabtreebooks.com

National Standards Correlation

Lesson Plan Title	Correlation to National Standards
It Doesn't "Ad" Up	**Language Arts** Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information). **Social Studies** The learner can analyze group and institutional influences on people, events, and elements of culture.
What's in There?	**Language Arts** Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information). **Mathematics** Students should represent data using tables and graphs such as line plots, bar graphs, and line graphs. **Science** Students should develop understanding of personal health.
Fitness by the Numbers	**Mathematics** Students should understand the effects of multiplying and dividing whole numbers. Students should develop fluency in adding, subtracting, multiplying, and dividing whole numbers. **Science** Students should develop understanding of regulation and behavior.
Living Off the Land	**Language Arts** Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. **Science** Students should develop understanding of populations, resources, and environments. **Social Studies** The learner can compare similarities and differences in the ways groups, societies, and cultures meet human needs and concerns. The learner can examine, interpret, and analyze physical and cultural patterns and their interactions, such as land use, settlement patterns, cultural transmission of customs and ideas, and ecosystem changes.

Lesson Plan Title	Correlation to National Standards
My Food Pyramid	**Language Arts** Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information). **Mathematics** Students should represent data using tables and graphs such as line plots, bar graphs, and line graphs. **Science** Students should develop understanding of personal health.
Go, Slow, or Whoa?	**Mathematics** Students should solve problems that arise in mathematics and in other contexts. **Science** Students should develop understanding of personal health. Students should develop understanding of risks and benefits.
Take a Stand	**Language Arts** Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information). **Science** Students should develop understanding of personal health.
Balancing Act	**Language Arts** Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience. **Mathematics** Students should develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers. Students should develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

For state specific educational standards, please visit http://www.crabtreebooks.com/.

Overview and Scope of Lesson Plan Activities

Lesson Plan Title	Subject Areas	Major Concepts
It Doesn't "Ad" Up	Art Language Arts Music Social Studies	• analyzing advertisements • using persuasive methods
What's in There?	Health Math Science	• Nutrition Facts labels • bar graphs
Fitness by the Numbers	Math Physical Education Science	• aerobic exercise • division • multiplication
Living Off the Land	Language Arts Science Social Studies	• environment and food production • nutrients
My Food Pyramid	Health Math Science	• food pyramid • food groups • portion size
Go, Slow, or Whoa?	Health Math	• choosing healthy foods • Nutrition Facts labels
Take a Stand	Art Health Language Arts	• health advocacy • persuasive speaking
Balancing Act	Health Language Arts Math	• food pyramid • synthesizing information from several sources • adding whole numbers and fractions

Pacing Chart and Vocabulary

One class period is approximately 40 minutes.

Lesson Plan Title	Pacing	Vocabulary	Assessment
It Doesn't "Ad" Up	1–2 class periods	bandwagon endorse persuasive slogan target audience	Evaluate reproducibles, advertisements, and presentations for understanding of major concepts.
What's in There?	1–2 class periods	Percent Daily Value saturated fat sodium	Observe participation during the activity and discussion. Evaluate paragraphs or bulleted lists for accuracy and completeness.
Fitness by the Numbers	1 class period	aerobic endurance sedentary	Check reproducibles for accuracy.
Living Off the Land	1–2 class periods	nutrients	Evaluate reproducibles and presentations for completeness and understanding of major concepts.
My Food Pyramid	1–2 class periods	food pyramid food group ounce	Check reproducibles for accuracy.
Go, Slow, or Whoa?	1–2 class periods	sugars	Check reproducibles for accuracy.
Take a Stand	1–2 class periods	advocate	Evaluate presentations for persuasiveness and understanding of major concepts.
Balancing Act	1–2 class periods	serving size	Check reproducibles for accuracy.

It Doesn't "Ad" Up

A Lesson on Advertising

Content

Students will gain a better understanding of advertising methods. They will use their knowledge to analyze and create advertisements.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Social Studies

The learner can analyze group and institutional influences on people, events, and elements of culture.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:

 Linguistic

 Musical

 Visual-Spatial

Prerequisites

Students should read the books *Big Fat Lies: Advertising Tricks* and *Grocery Shopping: It's in the Bag* to familiarize themselves with persuasive methods used in advertising. Before class begins, collect approximately twenty magazine advertisements for food products.

Materials

- *Big Fat Lies: Advertising Tricks* and *Grocery Shopping: It's in the Bag* books
- print, online, or television advertisements for a children's cereal and a sports drink
- chalkboard and chalk or whiteboard and markers
- student copies of the *It Doesn't "Ad" Up* reproducible
- magazine advertisements for food products (two per group)
- markers or colored pencils
- drawing paper

Instructional Procedure

Anticipatory Set

Show students a print, online, or television advertisement for a children's breakfast cereal. Explain that a *target audience* is the specific group of people advertisers are trying to influence. Ask students to identify the target audience for the cereal ad. (children) Have them describe how they know the target audience. (The ad includes a cartoon character and bright colors.) Then, show an ad for a sports drink and ask them to identify the target audience. (athletes) Again, have students describe how they know the target audience. (The ad includes a picture of an athlete and sports-related words.)

Class Discussion

Write the following words on the board: *bandwagon, slogan,* and *endorse*. Explain that advertisers use many different methods to persuade people to buy their products. Have students refer to *Big Fat Lies: Advertising Tricks* to define *bandwagon appeal*. (The advertiser makes it seem that the product will make someone popular.) Also have them define *endorse*. (A famous person says that a product is good.) Ask volunteers to give examples of *slogans*. ("Just do it," "Got milk?") Then, have students look for those methods in the cereal and sports drink ads. Ask: *What other methods might advertisers use?* (food styling, prizes, jingles, misleading claims)

Objectives

The student will be able to…

- analyze persuasive methods used in advertising
- design an advertisement using persuasive methods

Activity

Part I: Reading Ads

Distribute the *It Doesn't "Ad" Up* reproducible. Divide the class into small groups. Give each group two magazine advertisements for food products. Have students analyze the persuasive methods the advertisers use. Ask them to record their responses on the reproducible. Then, have the groups show the advertisements to the class and explain the persuasive methods used in each.

Part II: Creating Ads

Distribute the markers or colored pencils and drawing paper. Ask each group to design an advertisement for a healthy food using at least three forms of persuasion. Also have them write a jingle for the food. Ask students to present their advertisements and jingles to the class, describing the persuasive methods they used.

Accommodations and Extensions

Have students work together in a single group to analyze one advertisement. Help them recognize the persuasive techniques the advertisers use.

As an extension, have students create a television advertisement for a healthy food. Encourage them to write a script and perform it. Have students record their performance of the ad and play it for the class.

Closure

Lead a discussion about the ethics of using advertising to promote healthy foods. For example, do students feel that advertising tactics are always harmful? Or do they feel that people benefit from eating healthy foods, so persuasion in that case is helpful?

Assessment

Evaluate reproducibles, advertisements, and presentations for understanding of major concepts.

What's in There?

A Lesson on Nutrition Facts Labels

Content

Students will create a bar graph to compare the fats, sodium, and sugars in a variety of foods.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Mathematics

Students should represent data using tables and graphs such as line plots, bar graphs, and line graphs.

Science

Students should develop understanding of personal health.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:

 Linguistic

 Logical-Mathematical

 Visual-Spatial

Prerequisites

Students should read the book *Looking at Labels: The Inside Story* before proceeding with the lesson. Before class begins, collect empty packages for the following snack foods, making sure that the packages include Nutrition Facts labels: microwave popcorn with butter and salt, ordinary pretzels, dried fruit with no added sugar, candy bars, hard candy, corn or potato chips, yogurt, cookies, raw vegetables, crackers. Students should also review how to create a bar graph.

Materials

- *Looking at Labels: The Inside Story* books
- empty packages for microwave popcorn and pretzels
- chalkboard and chalk or whiteboard and markers
- empty snack packages, listed above (one package per group)
- red, orange, green, and blue markers (one set per group)
- student copies of the *What's in There?* reproducible
- cellophane tape
- paper
- pencils

Instructional Procedure

Anticipatory Set

Show students empty packages of buttered, salted microwave popcorn and ordinary pretzels. Point out that popcorn is a whole grain, while many pretzels are not made from whole grains. Add that popcorn is higher in fiber than pretzels are. Ask which snack they think is healthier. (popcorn) Point out the Nutrition Facts labels, and ask what information can be found there. (serving size, calories, fat, sodium, sugars, nutrients) For each snack, have volunteers read aloud the calories, total fat, and sodium per serving. Write the information on the board. Have students compare the numbers and determine which snack is healthier. (pretzels)

Class Discussion

Write the following words and phrases on the board: *Percent Daily Value*, *saturated fat*, *sodium*. Have students turn to page 6 of *Looking at Labels: The Inside Story*. Explain that the numbers under the "% Daily Value" heading show how much of the recommended daily value of fats, sodium, and other substances a food contains. Remind students that saturated fat is associated with health problems such as heart disease. Ask how much saturated fat the macaroni and cheese contains. (3 grams, or 15% of

Objectives

The student will be able to…

- read a Nutrition Facts label
- work collaboratively in groups to create a bar graph
- use a bar graph to compare foods based on several criteria

the Daily Value) Add that excess sodium can contribute to high blood pressure, and ask how much sodium the macaroni and cheese contains. (470 milligrams, or 20% of the Daily Value) Point out the asterisk after the "% Daily Value" heading, and have a volunteer read the note aloud.

Activity

Divide the class into groups of three or four. Give each group a different empty snack package, a copy of the *What's in There?* reproducible, and a set of markers. Demonstrate how to record a percentage as a bar on the reproducible. Have each group read the Nutrition Facts label on the snack package to find the Percent Daily Values of total fat, saturated fat, sodium, and sugars. Ask students to take turns recording the percentages as bars on their graph.

When all the groups are finished, have them tape the reproducibles together to form a single bar graph. Be sure the individual graphs are aligned. Ask students to rank the foods by four separate criteria: total fat, saturated fat, sodium, and sugars. Lead a discussion about the healthy and unhealthy aspects of the foods. Then, have students write a paragraph describing steps they can take to choose healthy snacks.

Accommodations and Extensions

Have students work in mixed ability groups to complete the reproducible. Then, have students create a bulleted list of the steps they can take to choose healthy snacks.

As an extension, give each group a second copy of the *What's in There?* reproducible and have them replace the labels at the bottom of the graph with *vitamin A, vitamin C, calcium,* and *iron*. Assign a different color to each nutrient, and ask the groups to complete and assemble their bar graphs. Then, have them rank the foods by those nutrients.

Closure

Have students discuss the snacks they studied in the context of a 2,000 calorie diet. For example, how would each snack affect their overall calorie intake? How would it affect the total nutrients they would get during the day?

Assessment

Observe participation during the activity and discussion. Evaluate paragraphs or bulleted lists for accuracy and completeness.

Fitness by the Numbers

A Lesson on Exercise

Content

Students will practice multiplication and division while learning about aerobic exercise.

National Standards

The following standards will be addressed in the lesson:

Mathematics

Students should understand the effects of multiplying and dividing whole numbers.

Students should develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

Science

Students should develop understanding of regulation and behavior.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:

 Bodily-Kinesthetic

 Logical-Mathematical

Prerequisites

Students should read the books *A Million Moves: Keeping Fit* and *Energy In, Energy Out: Food as Fuel* before proceeding with the lesson.

Materials

- *A Million Moves: Keeping Fit* and *Energy In, Energy Out: Food as Fuel* books
- student copies of the *Fitness by the Numbers* reproducible
- a clock with a second hand or a digital timer
- chalkboard and chalk or whiteboard and markers

Instructional Procedure

Anticipatory Set

Distribute the *Fitness by the Numbers* reproducible. Model finding your pulse at your wrist and neck. Have students follow your example, choosing the area where they feel their pulse beating strongly. Signal them to begin silently counting their heartbeats. After 10 seconds, have them stop and write the number of heartbeats on the reproducible. Tell them to multiply this number by 6 to find their resting heart rate. Tell students that heart rates vary in people of different ages and from person to person. For example, the average heart rate for a 10-year-old is 90 beats per minute, but anything from 60 to 110 beats per minute is considered normal.

Class Discussion

Tell students that calories are a measurement of the energy foods produce when we eat them. Ask what happens when we eat food with more calories than we use. (The calories are stored as fat.) Write the word *sedentary* on the board, and explain that a sedentary person exercises very little. Ask what problems a sedentary person might have. (He or she might gain weight, wouldn't be strong, and could have health problems.) Write the words *aerobic* and *endurance* on the board, and explain that both words refer to exercise that increases muscles' ability to work over long periods of time. Ask for examples of aerobic exercises that help increase endurance. (running, bicycling, swimming)

Objectives

The student will be able to…

- define *sedentary*, *aerobic*, and *endurance*
- monitor heart rate at rest and during exercise
- calculate calories burned during moderate and vigorous exercise

Activity

Part I: Calculating Heart Rate

Have students walk around the classroom. After 60 seconds, ask them to stop, count their heartbeats for 10 seconds, and calculate their heart rate on the *Fitness by the Numbers* reproducible. Next, have students run quickly in place for 60 seconds and then calculate their heart rate. Ask whether walking or running causes the heart and lungs to work harder. (running) Explain that walking is an example of moderate exercise and running is an example of vigorous exercise. Point out that the heart beats faster during vigorous exercise because it must carry more oxygen to the muscles.

Part II: Using Calories

Tell students that a person uses about 4 calories per minute while walking and about 12 calories per minute while running. Ask: *How many calories would you use if you walked for 10 minutes?* (40) *How many calories would you use if you ran for 10 minutes?* (120) Refer to the calories listed on the reproducible and model dividing the calories in a 12-ounce can of cola by 4 calories per minute (36 minutes) and by 12 calories per minute (12 minutes). Have students calculate the number of minutes they would need to walk and run to use the calories in each food. Ask them to check their answers with a partner.

Accommodations and Extensions

Review multiplication and division, and have students work in pairs. For part B of the reproducible, assign each pair two foods—one with a high calorie content and one with a low calorie content. Ask students to make the calculations together, checking each other's work. When they have finished, review the answers with the whole group.

As an extension, have students research the calories used during their favorite sport or other physical activity. Have them calculate the time required to use the calories in each food.

Closure

Ask students whether they were surprised by any of the results. (Yes, I was surprised that I would have to walk for 108 minutes to burn the calories in a hamburger.) Encourage them to discuss any changes they might make to their diet or activity level based on their calculations.

Assessment

Check reproducibles for accuracy.

Living Off the Land

A Lesson on Nutrition Around the World

Content

Students will strengthen their understanding of food groups and nutrients. They will then research food production and nutrition around the world.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

Science

Students should develop understanding of populations, resources, and environments.

Social Studies

The learner can compare similarities and differences in the ways groups, societies, and cultures meet human needs and concerns.

The learner can examine, interpret, and analyze physical and cultural patterns and their interactions, such as land use, settlement patterns, cultural transmission of customs and ideas, and ecosystem changes.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:

 Linguistic

 Naturalistic

Prerequisites

Students should read the books *The Shape of Good Nutrition: The Food Pyramid* and *Grocery Shopping: It's in the Bag* before proceeding with the lesson. Before class begins, draw a table with six columns and eleven rows on a sheet of poster board. Label the columns *Country*, *Grains*, *Vegetables*, *Fruits*, *Milk*, and *Meat and Beans*. Match the colors of the headings to those associated with each group in the food pyramid. Leave space under each heading to list the group's key nutrients during class discussion.

Materials

- *The Shape of Good Nutrition: The Food Pyramid* and *Grocery Shopping: It's in the Bag* books
- poster board
- markers
- chalkboard and chalk or whiteboard and markers
- wall map of the world
- student copies of the *Living Off the Land* reproducible

Instructional Procedure

Anticipatory Set

Ask students to name foods they like to eat for lunch or dinner and to identify a major ingredient of each food. (pizza: cheese; burrito: beans) Have them turn to page 6 of *The Shape of Good Nutrition: The Food Pyramid*, and find the food group to which the ingredient belongs. (Milk, Meat and Beans)

Class Discussion

Write the word *nutrients* on the board and define the term as "chemical compounds that make up foods." Add that protein, vitamins, and minerals are examples of nutrients. Show students the table listing the food groups. Ask them to recall the food they like and the food group to which it belongs. Then, have them reread *The Shape of Good Nutrition: The Food Pyramid* to find the nutrients their food provides. (calcium, protein) As the class discusses each food group, write the group's key nutrients under the column head.

List the following foods on the board: *hamburger, bread, corn, potatoes*. Ask students to raise their hands if they have eaten one of these foods in the past week. Explain that these foods are common because the United States produces large quantities of them. On a world map, point to the region of the United States extending from Wisconsin to Oregon. Tell students that the land in that region is very good for growing wheat. Ask: *What food group does wheat belong to?* (grains) Point to China on the map

Objectives

The student will be able to…

- identify nutrients provided by various foods
- recognize foods that provide similar nutrients
- understand ways in which environment influences food production and diet

and explain that rice is a common food there because parts of the country are very good for growing it. Ask: *What food group does rice belong to?* (grains) *What do both wheat and rice provide?* (carbohydrates, fiber) Tell students that many different foods provide people with the nutrients they need to stay healthy and strong.

Activity

Divide the class into groups of two or three and distribute the *Living Off the Land* reproducible. Assign one of the following countries to each group: Brazil, India, Indonesia, Ireland, Italy, Japan, Mexico, Mozambique, Nigeria, Norway. Have students use reference books or Internet sources to research the country's land as well as two foods from different food groups that are produced there. Ask them to identify the major nutrients each food provides.

Next, have the groups present the results of their research. During the presentations, ask one member of each group to write the name of the country in the table and list the two foods in the correct columns. Ask: *What foods in the table provide similar nutrients?* (fish and beans, oranges and mangoes) *How do people benefit from the fact that many foods provide similar nutrients?* (People can live in many different parts of the world and grow food that gives them the nutrients they need. Also, if there is not enough of one food, people can eat a different food to get the same nutrients.)

Accommodations and Extensions

Assign each group one specific food produced each country, such as potatoes in Ireland or fish in Norway.

As an extension, invite students to choose a food from another country and prepare it with an adult's help. Have them write the recipe, the nutrients provided by the major ingredients, and a description of the food's appearance and taste. Encourage them to include a photograph of the food.

Closure

Ask students how the world would be different if only one food provided each essential nutrient. (People would eat the same foods throughout their lives. It would be difficult to live in parts of the world where those foods did not grow.)

Assessment

Evaluate reproducibles and presentations for completeness and understanding of major concepts.

My Food Pyramid

A Lesson on Personal Nutrition

Content

Students will apply their knowledge of the food pyramid to evaluate their own diets and develop a plan to improve nutrition.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Mathematics

Students should represent data using tables and graphs such as line plots, bar graphs, and line graphs.

Science

Students should develop understanding of personal health.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:

 Logical-Mathematical

 Visual-Spatial

Prerequisites

Have students read *The Shape of Good Nutrition: The Food Pyramid* before proceeding with the lesson. Before class begins, collect the following items: a slice of bread, two medium carrots, a small apple, a half-pint container of milk, and a deck of playing cards. Also, a day or more before the lesson, instruct students to carry paper and a pencil with them throughout the day and list everything they eat or drink except plain water.

Materials

- *The Shape of Good Nutrition: The Food Pyramid* books
- chalkboard and chalk or whiteboard and markers
- a slice of bread
- two medium carrots
- a small apple
- a half-pint container of milk
- a deck of playing cards
- student copies of the *My Food Pyramid* reproducible
- colored chalk
- colored pencils

Instructional Procedure

Anticipatory Set

Have students turn to page 6 of *The Shape of Good Nutrition: The Food Pyramid*, and ask them to list the five food groups. (Grains, Vegetables, Fruits, Milk, Meat and Beans) Write the following foods on the board: broccoli and cheese, oatmeal and strawberries, turkey and lettuce sandwich. Ask: *What food groups are included in each dish?* (Vegetables and Milk; Grains and Fruits; Meat and Beans, Vegetables, and Grains)

Class Discussion

Once again, draw students' attention to the food pyramid. Tell them that the size of each stripe shows how much food from that group a person should eat per day. Ask: *Which stripe is larger, Grains or Meat and Beans?* (Grains) *Should a person eat more foods from the Grains group or the Meat and Beans group?* (the Grains group) Write the following quantities on the board, and

Objectives

The student will be able to…

- understand the recommended daily intake for each food group
- draw a diagram showing his or her actual intake for each food group
- in small groups, develop a plan for improving nutrition

explain that they are recommended for young people aged 9 to 13. Demonstrate the approximate portion size for each group.

- Grains: 5–6 ounces (1 slice of bread = 1 ounce)
- Vegetables: 2–2½ cups (2 medium carrots = 1 cup)
- Fruits: 1½ cups (1 small apple = 1 cup)
- Milk: 3 cups (1 half-pint milk container = 1 cup)
- Meat and Beans: 5 ounces (a deck of cards = 2–3 ounces)

Activity

Distribute the *My Food Pyramid* reproducible. Have students refer to the list of foods they ate in one day and estimate the amount they ate from each food group. If there are foods on their lists that do not belong to any food group, have them include those in the "Other" category. Draw a triangle on the board, and say that one student ate 12 ounces of grains. Ask: *How many ounces of grains should she have eaten?* (5 to 6) Note that the orange stripe on page 6 of *The Shape of Good Nutrition: The Food Pyramid* represents about 6 ounces. Model drawing an orange stripe that represents twice that amount. Add that the student ate ½ cup of vegetables, and model drawing a narrow green stripe. Then, distribute the colored pencils, and ask students to draw their own food pyramids based on their estimates. Have students share their pyramids with a partner and together brainstorm specific foods they could add to their diets.

Accommodations and Extensions

Have students work in mixed-ability pairs to estimate the quantities they ate in each food group and draw their own food pyramids.

As an extension, have students calculate the percentages of the daily recommended intake that they actually consumed. For example, someone who ate 1 cup of fruit would have eaten 66 percent of the recommended amount.

Closure

Ask students to discuss the changes they think will be easiest and hardest to make in order to improve their nutrition.

Assessment

Check reproducibles for accuracy.

Go, Slow, or Whoa?

A Lesson on Choosing Healthy Foods

Content

Students will practice identifying Go, Slow, and Whoa foods by playing a card game. They will also compare the risks and benefits of eating various foods.

National Standards

The following standards will be addressed in the lesson:

Mathematics

Students should solve problems that arise in mathematics and in other contexts.

Science

Students should develop understanding of personal health.

Students should develop understanding of risks and benefits.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:

 Logical-Mathematical

Prerequisites

Have students read *Energy In, Energy Out: Food as Fuel* and *Snack Attack: Unhealthy Treats* before proceeding with the lesson. Before class begins, make a set of 12 playing cards for Go, Slow, and Whoa foods. Refer to the criteria on page 11 of *Snack Attack: Unhealthy Treats*. Model the cards on the Nutrition Facts labels on this page, but do not include the number of calories. Copy and shuffle a set of cards for each pair of students.

Materials

- *Energy In, Energy Out: Food as Fuel* and *Snack Attack: Unhealthy Treats* books
- chalkboard and chalk or whiteboard and markers
- Go, Slow, and Whoa playing cards, described above (one set per group)
- student copies of the *Go, Slow, or Whoa?* reproducible

Instructional Procedure

Anticipatory Set

Have students list as many sweet foods and drinks as they can. Write their responses on the board. Guide them to list fruits, dried fruits, and 100-percent fruit juices as well as products with added sugar.

Class Discussion

Write the word *sugars* on the board. Explain that there are many kinds of sugars, including those that occur naturally in foods such as apples and raisins and those that are added to foods such as ice cream and candy. Have students turn to page 11 of *Snack Attack: Unhealthy Foods* and review the criteria for Go, Slow, and Whoa foods. Ask: *Which of the foods on the list are likely to be Whoa foods?* (candy, cookies, doughnuts) Point out that not all foods with sugars in them are Whoa foods. For example, most fresh fruits are Go foods. Add that large amounts of fat, cholesterol, and sodium can also make foods Slow or Whoa foods. However, even Go foods such as low-fat yogurt and cheeses contain small amounts of those bad nutrients.

Have students discuss the risks and benefits of eating an ice cream pop and mini pretzel twists. (The ice cream pop is high in fat, but it contains vitamin A and tastes good. The pretzel twists have cholesterol and sodium in them, but they are low in fat.) Tell students that choosing the best foods means comparing good and bad qualities and thinking about the consequences of their choices.

Objectives

The student will be able to…

- identify Go, Slow, and Whoa foods
- compare the risks and benefits of eating Go, Slow, and Whoa foods

Activity

Divide the class into pairs, and distribute a set of Go, Slow, and Whoa playing cards to each group. Read the following directions aloud:

1. Keeping the cards face down, divide them evenly between the players.
2. The first player will turn a card face up.
3. The second player will try to guess whether the card is for a Go, Slow, or Whoa food.
4. After the player guesses, he or she will check the card against the guidelines on page 11 of *Snack Attack: Unhealthy Treats*. If the guess is right, the player keeps the card. If the guess is wrong, the player who dealt the card keeps it.
5. Players will take turns dealing cards and guessing.
6. After all the cards have been dealt, the player with the most cards wins.

At the end of the game, have students choose three cards: one for a Go food, a Slow food, and a Whoa food. Distribute the *Go, Slow, or Whoa?* reproducible, and ask them to complete it.

Accommodations and Extensions

During the game, allow students to refer to the guidelines on page 11 of *Snack Attack: Unhealthy Treats* before making their guesses. After the game, have students work in pairs to complete the reproducible. In addition, rather than have students choose three cards, give each pair a card for a Go food, a Slow food, and a Whoa food.

As an extension, have students choose Go, Slow, and Whoa foods to create their own cards for the game.

Closure

Ask students how they could best fit the Slow and Whoa foods they enjoy into a healthy diet. (eat smaller portions, eat them only once in a while, eat healthier versions such as baked French fries or low-fat ice cream)

Assessment

Check reproducibles for accuracy.

Take a Stand

A Lesson on Health Advocacy

Content

Students will learn about health advocacy and persuasion. They will apply their knowledge to make a persuasive presentation about a health issue.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Language Arts

Students should develop understanding of personal health.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:

 Linguistic

 Logical-Mathematical

 Visual-Spatial

Prerequisites

Have students read *Fast Food: Slowing Us All Down* and *Grocery Shopping: It's in the Bag* before proceeding with the lesson. Particular attention should be focused on the sections that define health advocacy.

Materials

- *Fast Food: Slowing Us All Down* and *Grocery Shopping: It's in the Bag* books
- chalkboard and chalk or whiteboard and markers
- student copies of the *Take a Stand* reproducible (one per group)
- poster board (one per group)
- markers

Instructional Procedure

Anticipatory Set

Model an unconvincing argument in favor of increasing exercise. For example, do not give supporting facts, do not show enthusiasm, and do not present a basis for credibility. Then, ask students to critique the argument. Ask: *What could I have done differently to be more convincing?* (You could have given more facts and been more excited about the topic.)

Class Discussion

Explain that an *advocate* tries to convince others to take certain actions. Remind students that a health advocate takes a healthy stand on an issue, persuades others to make a healthy choice, and must be convincing. Write the following questions on the board:

- What facts support your healthy stand?
- Why should someone listen to you?
- How can you use feelings to convince your audience?

Ask students to imagine they are at a fast food restaurant. They want to convince a friend to eat a grilled chicken sandwich rather than a fried chicken sandwich. Ask: *What facts support your healthy stand?* (Fried foods are high in calories and fat, including saturated fat and trans fats. Grilled foods have less fat and fewer calories.) *Why should someone listen to you?* (I have studied nutrition in school.) *How can you use feelings to convince the person?* (I could say that eating foods low in calories and fat can help my friend feel healthy and do better in sports.)

Objectives

The student will be able to…

- define *advocate*
- in a small group, give a health advocacy presentation

Activity

List the following health issues on the board: *food groups, serving size, weight, fast food, choosing healthy snacks,* and *grocery shopping*. Have students brainstorm one or more healthy stands for each issue; write their responses on the board. Divide the class into groups of two or three and assign a different healthy stand to each group. Distribute the *Take a Stand* reproducible, poster board, and markers. Ask students to research their healthy stand in the books *Fast Food: Slowing Us All Down* and *Grocery Shopping: It's in the Bag*, and have them use the reproducible to plan a presentation. Remind students that their presentations should be convincing and should persuade listeners to make a healthy choice. Have each group create a poster—which may include facts, suggestions, graphs, pictures, or other elements—to support their argument. Tell students that each member of the group should give part of the presentation.

Accommodations and Extensions

Suggest specific pages in the books *Fast Food: Slowing Us All Down* and *Grocery Shopping: It's in the Bag* that contain information about students' topics. Encourage students to write scripts for their presentations.

As an extension, have students research their topics using other books or online sources. Explain how to find reliable sources, and demonstrate recording the author and title of a print or online source. Ask students to name and refer to their sources during their presentations.

Closure

Have students list ways they could use their skills as health advocates with their friends and family. (I could help my family buy healthier foods. I could exercise with my friends more.) Then, ask them how they could use their skills in the community. (I could ask the owner of the convenience store to sell fresh fruit and vegetables. I could ask the health club manager to give discounts for kids.)

Assessment

Evaluate presentations for persuasiveness and understanding of major concepts.

Balancing Act

A Lesson on Meal Planning

Content

Students will reinforce their understanding of the food pyramid by planning healthy meals. Students will also practice their research skills by synthesizing information from books, class discussion, and interviews.

National Standards

The following standards will be addressed in the lesson:

Language Arts

Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

Mathematics

Students should develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers.

Students should develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

Multiple Intelligences

The following intelligences will be activated throughout the lesson:


Linguistic


Logical-Mathematical

Prerequisites

Students should read the books *Grocery Shopping: It's in the Bag* and *The Shape of Good Nutrition: The Food Pyramid* before proceeding with the lesson. Before class begins, prepare six large pieces of paper with the following colored headings: *Grains* (orange), *Vegetables* (green), *Fruits* (red), *Milk* (blue), *Meat and Beans* (purple), *More than One Group* (black). Students should also review adding fractions.

Materials

- *Grocery Shopping: It's in the Bag* and *The Shape of Good Nutrition: The Food Pyramid* books
- six large pieces of paper
- markers
- paper
- pencils
- student copies of the *Balancing Act* reproducible (two per student)

Instructional Procedure

Anticipatory Set

Invite students to imagine that they have a personal chef. Ask: *What healthy foods would you want your chef to prepare for you?* (salad, steak, tacos)

Classroom Discussion

Display a large piece of paper for each food group and one for multiple food groups. Have students reread pages 10–11 of *Grocery Shopping: It's in the Bag*. Ask: *What suggestions does the author give for the Meat and Beans food group?* (Choose lean meats. Eat different foods with protein in them. Eat fresh fish.) Write their responses at the top of the Meat and Beans paper. Follow the same steps for Grains (pages 12–13), Milk (pages 14–15), Fruits (pages 18–19), and Vegetables (pages 20–21). Then, have students brainstorm as many healthy foods as possible from each food group, and list their responses. Prompt them to include a wide range of foods in each group. Finally, have them turn to pages 20–21 of *The Shape of Good Nutrition: The Food Pyramid*, and review the guidelines for serving sizes.

Objectives

The student will be able to…

- plan healthy meals using the food pyramid
- conduct an interview
- add whole numbers and fractions

Activity

Part I: Gathering Options

Distribute the paper and pencils. Ask students to turn their papers sideways and write the following headings at the top of the page: *Grains, Vegetables, Fruits, Milk, Meat and Beans*, and *More than One Group*. Have each student interview a partner and write his or her favorite healthy foods from each group. Then, ask students to reread the lists the class made, find other foods their partners might like, and add those to their interview notes.

Part II: Planning Meals

Distribute two copies of the *Balancing Act* reproducible to each student. Tell students that they will plan two days' worth of meals for their partners. Add that no food should appear more than once in the plans. Caution students to plan realistic, healthy, and tasty meals. Read aloud the directions on the reproducible, and answer any questions students may have.

Accommodations and Extensions

Have students create one meal plan instead of two. In addition, copy the following chart on the board to help students include the correct number of servings.

Meal	Grains	Vegetables	Fruits	Milk	Meat and Beans
Breakfast	2 ounces		½–1 cup	1 cup	
Lunch	2 ounces	½ cup	1 cup	1 cup	2 ounces
Snack		1 cup			
Dinner	2 ounces	1 cup		1 cup	3–3½ ounces
Total	6 ounces	2½ cups	1½–2 cups	3 cups	5–5½ ounces

As an extension, provide students with cookbooks or access to recipe web sites, and have them choose healthy dishes to include in their meal plans. Ask students to calculate the food group servings for each recipe based on its ingredients and the number of servings it yields.

Closure

After assessing the meal plans, return them to the students for whom they were designed. Encourage students to try some of the foods on their plans, especially those that they do not usually eat. Have students report how well they followed the plans after one week.

Assessment

Check reproducibles for accuracy.

Name _____ **Date** _____

It Doesn't "Ad" Up

Directions: Look at two magazine advertisements for food products. For each ad, name two methods the advertiser uses to persuade readers to buy the product. Those may include bandwagon appeal, a slogan, an endorsement, food styling, or misleading claims. Explain how the advertisers use each method in the ads. Then, write whether you think the ad is effective and why.

1. Product advertised: _____

   Persuasive method: _____ How it is used: _____

   _____

   Persuasive method: _____ How it is used: _____

   _____

   Do you think the advertisement is effective? Why or why not? _____

   _____

   _____

2. Product advertised: _____

   Persuasive method: _____ How it is used: _____

   _____

   Persuasive method: _____ How it is used: _____

   _____

   Do you think the advertisement is effective? Why or why not? _____

   _____

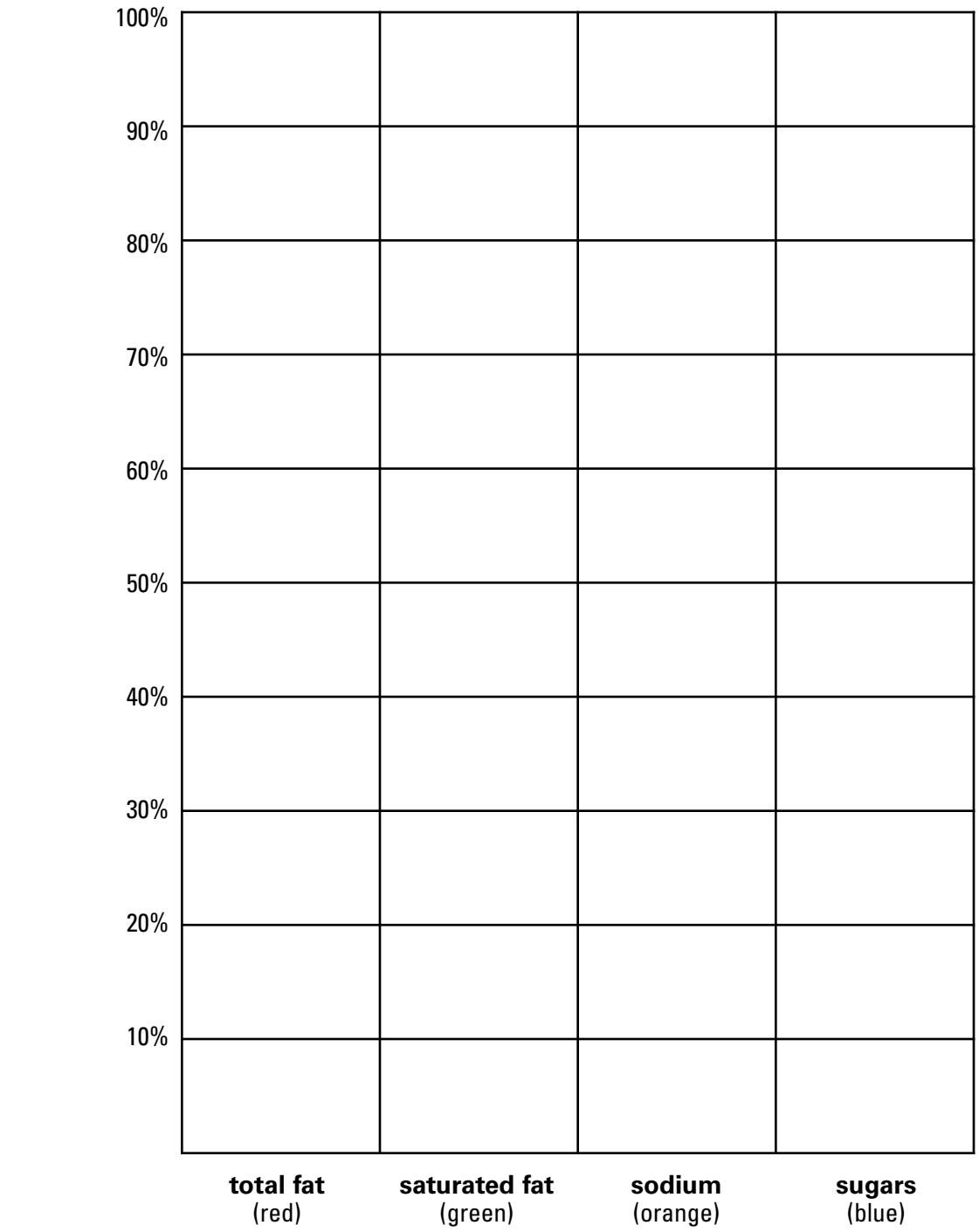
   _____

Name _____ **Date** _____

What's in There?

Directions: Read the Nutrition Facts label on a snack package to find the Percent Daily Value of total fat, saturated fat, sodium, and sugars. Record each Percent Daily Value as a bar on the graph using the color listed.

Snack Food: _____



Name _____ Date _____

Fitness by the Numbers

A: Record your number of heartbeats for 10 seconds after sitting, after walking, and after running. Multiply that number by 6 to find your heart rate in beats per minute (bpm) during each activity.

Sitting: _____ Walking: _____ Running: _____

x 6 x 6 x 6

Heart rate: _____ bpm Heart rate: _____ bpm Heart rate: _____ bpm

B: A person uses about 4 calories per minute while walking and about 12 calories per minute while running. Calculate the number of minutes a person needs to walk and run to use the calories in each food.

Food	Calories	Minutes Needed to Use Calories	
		Walking	Running
12 oz. can of cola	144		
milkshake	348		
1 cup of skim milk	84		
fast food hamburger	432		
roasted chicken drumstick	108		
slice of cheese pizza	276		
1 cup of raw carrots	48		
1 oz. serving of potato chips	156		

Name _____ Date _____

Living Off the Land

Directions: Write the name of the country you are researching, and label it on the map. Then, answer the questions about the country's land and foods.

Country _____

Describe the country's land. For example, how much of the land is good for farming? What is the climate? Is the country near the ocean?

_____

_____

List two foods produced in the country, the food group each one belongs to, and the nutrients each one provides:

1. Food: _____ Food Group: _____

   Nutrients: _____

2. Food: _____ Food Group: _____

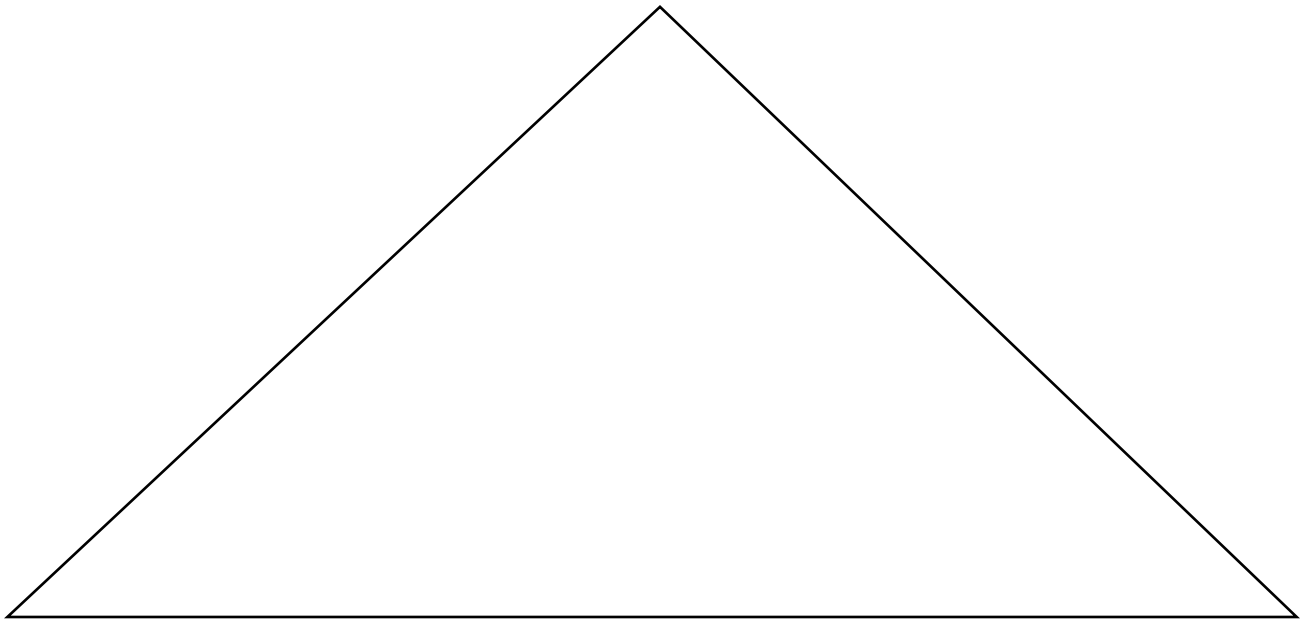
   Nutrients: _____

Name _____ **Date** _____

My Food Pyramid

Directions: Using the list of foods you ate in a day, estimate the amount you ate from each food group. Then, draw stripes in the food pyramid that represent those amounts. For example, if you ate half a cup of vegetables, your green stripe will be narrow. If you ate foods that do not belong to a food group (such as cola or candy), include them in the "Other" stripe. Then, work with a partner to answer the questions that follow.

	Grains	Vegetables	Fruits	Milk	Meat and Beans	Other
Recommendation	5–6 ounces	2–2½ cups	1½ cups	3 cups	5 ounces	0 cups
How much you ate	____ ounces	____ cups	____ cups	___ cups	___ ounces	___ cups



Which food groups do you need **less** of? _____

Which food groups do you need **more** of? _____

For the groups you need more of, brainstorm specific foods you could add to your diet.

Group			
Foods	1. 2. 3. 4. 5. 6.	1. 2. 3. 4. 5. 6.	1. 2. 3. 4. 5. 6.

Name _____ **Date** _____

Go, Slow, or Whoa?

Directions: Choose three cards: one for a Go food, a Slow food, and a Whoa food. Then answer the questions below.

1. Food: _____

   What Percent Daily Value of the following nutrients does the food provide?

   Total Fat _____% Cholesterol _____% Sodium _____% Sugars _____% Fiber _____%

   Protein _____% Vitamin A _____% Vitamin C _____% Calcium _____% Iron _____%

   Is this a Go, Slow, or Whoa food? _____ What are the benefits of eating this food?

   _____

   What are the risks? _____

2. Food: _____

   What Percent Daily Value of the following nutrients does the food provide?

   Total Fat _____% Cholesterol _____% Sodium _____% Sugars _____% Fiber _____%

   Protein _____% Vitamin A _____% Vitamin C _____% Calcium _____% Iron _____%

   Is this a Go, Slow, or Whoa food? _____ What are the benefits of eating this food?

   _____

   What are the risks? _____

3. Food: _____

   What Percent Daily Value of the following nutrients does the food provide?

   Total Fat _____% Cholesterol _____% Sodium _____% Sugars _____% Fiber _____%

   Protein _____% Vitamin A _____% Vitamin C _____% Calcium _____% Iron _____%

   Is this a Go, Slow, or Whoa food? _____ What are the benefits of eating this food?

   _____

   What are the risks? _____

Name _____ Date _____

Take a Stand

Directions: With other group members, answer the following questions to prepare your presentation.

What healthy stand will your group take? _____

What facts support your healthy stand?

1. _____

2. _____

3. _____

Why should someone listen to your group?

_____

_____

_____

How can you use feelings to convince your audience?

_____

_____

_____

What will you put on your poster to convince your audience? (You may include facts, questions, directions, examples, graphs, pictures, or other items.)

1. _____

2. _____

3. _____

Name _____ Date _____

Balancing Act

Directions: Use the table below to plan a day's meals for your partner. Be sure to include the recommended number of servings from each food group. See pages 20–21 of *The Shape of Good Nutrition: The Food Pyramid* for information about serving sizes. (Note that a dish may contain servings from more than one food group. For example, a cheese sandwich on whole-grain bread contains one serving from the Milk group and two servings from the Grains group.)

Your Partner's Name _____ Girl or Boy? _____

Recommended Servings for Young People Aged 9 to 13 Who Exercise Every Day

Food Group	Girls	Boys
Grains	6 ounces	6 ounces
Vegetables	2½ cups	2½ cups
Fruits	1½ cups	2 cups
Milk	3 cups	3 cups
Meat and Beans	5 ounces	5½ ounces

Meal	Food	Servings from Each Group				
		Grains	Vegetables	Fruits	Milk	Meat and Beans
Breakfast						
Lunch						
Snack						
Dinner						
Total Servings						